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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/993,363

DATE: 12/03/2001
TIME: 14:00:29

Input Set : A:\Arcd382.app
Output Set: N:\CRF3\11212001\I993363.raw

ENTERED

3 <110> APPLICANT: ASHTON-RICKARDT, PHILIP G.
4 OPFERMAN, JOSEPH T.
5 PHILLIPS, TIPHANIE
7 <120> TITLE OF INVENTION: INDUCTION OF VIRAL IMMUNITY USING INHIBITORS OF
8 GRANZYMES
10 <130> FILE REFERENCE: ARCD:382USP1
C--> 12 <140> CURRENT APPLICATION NUMBER: US/09/993,363 *# 2.*
13 <141> CURRENT FILING DATE: 2001-11-14
15 <160> NUMBER OF SEQ ID NOS: 16
17 <170> SOFTWARE: PatentIn Ver. 2.1
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20 <211> LENGTH: 1626
21 <212> TYPE: DNA
22 <213> ORGANISM: Homo sapiens
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26 cggacgcggc acggagacgg cgccggctgt gacttaggtgg caggccctgc atcatggaaa 120
27 ctctttctaa tgcaagtggt acttttgcca tacgcctttt aaagataactg tgtcaagata 180
28 acccttcgca caacgtgttc tggctctctgt tgagcatctc ctctgcctgt gccatgggtc 240
29 tccttagggc aaagggaaac accgcaaccc agatggccca ggcactgtct tttaaacacag 300
30 aggaagacat tcatcggtt ttcagtcgc ttctcactga agtgaacaag gctggcacac 360
31 agtacctgct gagaacggcc aacaggctct ttggagagaa aacttgtcag ttcctctcaa 420
32 cguttaagga atcctgtctt caattctacc atgctgagct gaaggagctt tcctttatca 480
33 gagctgcaga agagtccagg aaacacatca acacctgggt ctcaaaaaaag accgaaggta 540
34 aaattgaaga gttgttgcgg ggttagctcaa ttgatgcaga aaccaggctg gttcttgtca 600
35 atgccatcta cttcaaaagga aagtggaaatg aaccgtttga cggaaacatac acaagggaaa 660
36 tgccctttaa aataaaaccag gaggagcaaa ggccagtgca gatgtatgtat caggaggcca 720
37 cguttaagct cggccacgtg ggcggagggtgc ggcgcagact gctggagctg ccctacgcca 780
38 ggaaggagct gggccgtg gtgtgtgtc ctgacacgg cgtggagctc agcacgggtg 840
39 aaaaaaagtct cactttgag aaactcacag cctggaccaa gccagactgt atgaagagta 900
40 ctgaggttga agttctccctt cccaaattta aactacaaga ggattatgac atggaatctg 960
41 tgcttcggca tttggaaattt gttgtatgcct tccaaacaggg caaggctgac ttgtcggcaa 1020
42 tgcacggca gagagacccgt tgctgttcca agttctgtca caagagttt gtggagggtga 1080
43 atgaagaagg caccggggca gggcagcgt cgagctgtt tgtagttgca gatgtgtcga 1140
44 tggaatctgg ccccaggttc tggtgttacc accctttctt tttcttcattc aggccacaaca 1200
45 gagccaaacag cattctgttc tggtggcagggt tctcatcgcc ataaagggtg cacttaccgt 1260
46 gcaactcggtt atttcccttct tccgtgttcc ccagatcccc actacagctc caagaggatg 1320
47 ggccttagaaa gccaagtgc aagatgggg cagattccctt acctgtgtc cctcatgatt 1380
48 tgccagcatg aattcatgtat gtcacact cgcttatgt acttaatcag aatcttgaga 1440
49 aaatagacca taatgattcc ctgttgttattt aaaattggca tccccccgaat tcccatagga 1500
50 tggcaagccaa agttcttcta gaattccaca tgcaattcac tctggcgacc ctgtgtttc 1560
51 ctgacactgc gaatacattc cttaaaccgc tgcctcagtg gtaataaatg gtgtctggcc 1620
52 gaattc 1626
55 <210> SEQ ID NO: 2
56 <211> LENGTH: 376
57 <212> TYPE: PRT
58 <213> ORGANISM: Homo sapiens

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60 <400> SEQUENCE: 2
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 64 Lys Ile Leu Cys Gln Asp Asn Pro Ser His Asn Val Phe Cys Ser Pro
 65 20 25 30
 67 Val Ser Ile Ser Ser Ala Leu Ala Met Val Leu Leu Gly Ala Lys Gly
 68 35 40 45
 70 Asn Thr Ala Thr Gln Met Ala Gln Ala Leu Ser Leu Asn Thr Glu Glu
 71 50 55 60
 73 Asp Ile His Arg Ala Phe Gln Ser Leu Leu Thr Glu Val Asn Lys Ala
 74 65 70 75 80
 76 Gly Thr Gln Tyr Leu Leu Arg Thr Ala Asn Arg Leu Phe Gly Glu Lys
 77 85 90 95
 79 Thr Cys Gln Phe Leu Ser Thr Phe Lys Glu Ser Cys Leu Gln Phe Tyr
 80 100 105 110
 82 His Ala Glu Leu Lys Glu Leu Ser Phe Ile Arg Ala Ala Glu Glu Ser
 83 115 120 125
 85 Arg Lys His Ile Asn Thr Trp Val Ser Lys Lys Thr Glu Gly Lys Ile
 86 130 135 140
 88 Glu Glu Leu Leu Pro Gly Ser Ser Ile Asp Ala Glu Thr Arg Leu Val
 89 145 150 155 160
 91 Leu Val Asn Ala Ile Tyr Phe Lys Gly Lys Trp Asn Glu Pro Phe Asp
 92 165 170 175
 94 Glu Thr Tyr Thr Arg Glu Met Pro Phe Lys Ile Asn Gln Glu Glu Gln
 95 180 185 190
 97 Arg Pro Val Gln Met Met Tyr Gln Glu Ala Thr Phe Lys Leu Ala His
 98 195 200 205
 100 Val Gly Glu Val Arg Ala Gln Leu Leu Glu Leu Pro Tyr Ala Arg Lys
 101 210 215 220
 103 Glu Leu Ser Leu Leu Val Leu Leu Pro Asp Asp Gly Val Glu Leu Ser
 104 225 230 235 240
 106 Thr Val Glu Lys Ser Leu Thr Phe Glu Lys Leu Thr Ala Trp Thr Lys
 107 245 250 255
 109 Pro Asp Cys Met Lys Ser Thr Glu Val Glu Val Leu Leu Pro Lys Phe
 110 260 265 270
 112 Lys Leu Gln Glu Asp Tyr Asp Met Glu Ser Val Leu Arg His Leu Gly
 113 275 280 285
 115 Ile Val Asp Ala Phe Gln Gln Gly Lys Ala Asp Leu Ser Ala Met Ser
 116 290 295 300
 118 Ala Glu Arg Asp Leu Cys Leu Ser Lys Phe Val His Lys Ser Phe Val
 119 305 310 315 320
 121 Glu Val Asn Glu Glu Gly Thr Glu Ala Ala Ala Ser Ser Cys Phe
 122 325 330 335
 124 Val Val Ala Glu Cys Cys Met Glu Ser Gly Pro Arg Phe Cys Ala Asp
 125 340 345 350
 127 His Pro Phe Leu Phe Phe Ile Arg His Asn Arg Ala Asn Ser Ile Leu
 128 355 360 365
 130 Phe Cys Gly Arg Phe Ser Ser Pro
 131 370 375

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Input Set : A:\Arcd382.app
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134 <210> SEQ ID NO: 3
 135 <211> LENGTH: 1819
 136 <212> TYPE: DNA
 137 <213> ORGANISM: Mus musculus
 139 <400> SEQUENCE: 3
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 141 aaggaaatgg caccttgcc atccatctt tgaagatgct atgtcaaagc aacccttcca 120
 142 aaaatgtatg ttattctcct gcgagcatct cctctgtct agctatggtt ctcttgggtg 180
 143 caaagggaca gacggcagtc cagatatctc aggcaacttgg tttgaataaa gagaaggca 240
 144 tccatcaggg tttcoagttg cttctcaga a gctgaacaa gccagacaga aagtactctc 300
 145 ttagagtgcc caacaggctc tttgcagaca aaaccttgta agtcctccaa acctttaagg 360
 146 agtcctctct tcacttctat gactcagaga tggagcagct tcctttqct gaagaagcag 420
 147 aggtgtccag gcaacacata aacacatggg tctccaaaca aactgaaggt aaaattccag 480
 148 agttgttgc aggtggctcc gtgcattcag aaaccaggct gtttctcatc aatgccttat 540
 149 attttaaagg aaagtggcat caaccattta acaaagagta cacaatggac atgccctta 600
 150 aaataaaacaa ggatgagaaa aggccagtgc agatgatgtg tcgtgaagac acatataacc 660
 151 tcgcctatgt gaaggaggtg caggcgcaag tgctgtgtat gccatatgaa ggaatggagc 720
 152 tgagcttgggt gtttctgtc ccagatgagg gtgtggacct cagcaaggtg gaaaacaatc 780
 153 tcacttttga gaagtttaca gcctggatgg aagcagattt tatgaagagc actgatgtt 840
 154 aggttttccct tccaaaattt aaactccaaag aggattatga catggatct ctgtttcagc 900
 155 gcttgggagt ggtggatgtc ttccaaagagg acaaggctga cttatcagga atgtctccag 960
 156 agagaaacact gtgtgtgtcc aagtttggt accagagtgt agtggagatc aatgaggaag 1020
 157 gcacagaggc tgcaggcagcc tctgcccata tagaattttg ctgtccctc tctgtcccaa 1080
 158 cattctgtgc tgaccaccccc ttcctttct tcatacaggca caacaaagca aacagcatcc 1140
 159 tgttctgtgg caggttctca tctccataaa gacacatata ctacacaggg agatgttct 1200
 160 cttcagtatc cttaccactc ctacagctt gtcaagatgg gcaagttaggg ggaagtcatg 1260
 161 ttctaagatg aagacacttt cttctctgt cagcctgtatc ttataatgcc tgcattcaac 1320
 162 ttcctctgtc ttgaatgtatc ctatgccctt taccaggta tgtctaattga tgccaaatac 1380
 163 cttctgtatc gctattgatt gatagcctag ccagtaattt atagccagtt agaactgact 1440
 164 tgactgtgca agaatgtat aatggagcta gagagaaggc acaaacacta gaaaaagggtt 1500
 165 ctgttttgc agaggacaca gggacattt ccaccactca catggatct tacaacctct 1560
 166 gaaaaattccaa gtttctgtcc atgacttgcat tcctttctt ggcttctact ggctccagca 1620
 167 tcctgcacat acatgtatcg tcattcaggta acacacaaac aagtaaaatt taaaaataa 1680
 168 ataaaaattt aaagagagag tctaaaattt tagtaatggt tagataatag ctgttattgt 1740
 169 gccttttca gttttaatg tcattattct tttgtataaa gtcataattat tataggaaaa 1800
 170 catcagtgcc ccggattc 1819
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 174 <211> LENGTH: 374
 175 <212> TYPE: PRT
 176 <213> ORGANISM: Mus musculus
 178 <400> SEQUENCE: 4
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 182 Lys Met Leu Cys Gln Ser Asn Pro Ser Lys Asn Val Cys Tyr Ser Pro
 183 20 25 30
 185 Ala Ser Ile Ser Ser Ala Leu Ala Met Val Leu Leu Gly Ala Lys Gly
 186 35 40 45
 188 Gln Thr Ala Val Gln Ile Ser Gln Ala Leu Gly Leu Asn Lys Glu Glu
 189 50 55 60

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191 Gly Ile His Gln Gln Phe Gln Leu Leu Leu Arg Lys Leu Asn Lys Pro
 192 65 70 75 80
 194 Asp Arg Lys Tyr Ser Leu Arg Val Ala Asn Arg Leu Phe Ala Asp Lys
 195 85 90 95
 197 Thr Cys Glu Val Leu Gln Thr Phe Lys Glu Ser Ser Leu His Phe Tyr
 198 100 105 110
 200 Asp Ser Glu Met Glu Gln Leu Ser Phe Ala Glu Ala Glu Val Ser
 201 115 120 125
 203 Arg Gln His Ile Asn Thr Trp Val Ser Lys Gln Thr Glu Gly Lys Ile
 204 130 135 140
 206 Pro Glu Leu Leu Ser Gly Gly Ser Val Asp Ser Glu Thr Arg Leu Val
 207 145 150 155 160
 209 Leu Ile Asn Ala Leu Tyr Phe Lys Gly Lys Trp His Gln Pro Phe Asn
 210 165 170 175
 212 Lys Glu Tyr Thr Met Asp Met Pro Phe Lys Ile Asn Lys Asp Glu Lys
 213 180 185 190
 215 Arg Pro Val Gln Met Met Cys Arg Glu Asp Thr Tyr Asn Leu Ala Tyr
 216 195 200 205
 218 Val Lys Glu Val Gln Ala Gln Val Leu Val Met Pro Tyr Glu Gly Met
 219 210 215 220
 221 Glu Leu Ser Leu Val Val Leu Leu Pro Asp Glu Gly Val Asp Leu Ser
 222 225 230 235 240
 224 Lys Val Glu Asn Asn Leu Thr Phe Glu Lys Leu Thr Ala Trp Met Glu
 225 245 250 255
 227 Ala Asp Phe Met Lys Ser Thr Asp Val Glu Val Phe Leu Pro Lys Phe
 228 260 265 270
 230 Lys Leu Gln Glu Asp Tyr Asp Met Glu Ser Leu Phe Gln Arg Leu Gly
 231 275 280 285
 233 Val Val Asp Val Phe Gln Glu Asp Lys Ala Asp Leu Ser Gly Met Ser
 234 290 295 300
 236 Pro Glu Arg Asn Leu Cys Val Ser Lys Phe Val His Gln Ser Val Val
 237 305 310 315 320
 239 Glu Ile Asn Glu Glu Gly Thr Glu Ala Ala Ala Ser Ala Ile Ile
 240 325 330 335
 242 Glu Phe Cys Cys Ala Ser Ser Val Pro Thr Phe Cys Ala Asp His Pro
 243 340 345 350
 245 Phe Leu Phe Phe Ile Arg His Asn Lys Ala Asn Ser Ile Leu Phe Cys
 246 355 360 365
 248 Gly Arg Phe Ser Ser Pro
 249 370
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 255 <211> LENGTH: 9
 256 <212> TYPE: PRT
 257 <213> ORGANISM: Mus musculus
 259 <400> SEQUENCE: 5
 260 Phe Gln Pro Gln Asn Gly Gln Phe Ile
 261 1 5
 264 <210> SEQ ID NO: 6
 265 <211> LENGTH: 9

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266 <212> TYPE: PRT
267 <213> ORGANISM: Mus musculus
269 <400> SEQUENCE: 6
270 Lys Ala Val Tyr Asn Phe Ala Thr Met
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274 <210> SEQ ID NO: 7
275 <211> LENGTH: 11
276 <212> TYPE: PRT
277 <213> ORGANISM: Mus musculus
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285 <211> LENGTH: 31
286 <212> TYPE: DNA
287 <213> ORGANISM: Mus musculus
289 <400> SEQUENCE: 8
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293 <210> SEQ ID NO: 9
294 <211> LENGTH: 18
295 <212> TYPE: DNA
296 <213> ORGANISM: Mus musculus
298 <400> SEQUENCE: 9
299 tgaagagaga actctccc 18
302 <210> SEQ ID NO: 10
303 <211> LENGTH: 22
304 <212> TYPE: DNA
305 <213> ORGANISM: Mus musculus
307 <400> SEQUENCE: 10
308 gccatccatc ttttgaagat gc 22
311 <210> SEQ ID NO: 11
312 <211> LENGTH: 21
313 <212> TYPE: DNA
314 <213> ORGANISM: Mus musculus
316 <400> SEQUENCE: 11
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320 <210> SEQ ID NO: 12
321 <211> LENGTH: 34
322 <212> TYPE: DNA
323 <213> ORGANISM: Mus musculus
325 <400> SEQUENCE: 12
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329 <210> SEQ ID NO: 13
330 <211> LENGTH: 24
331 <212> TYPE: DNA
332 <213> ORGANISM: Mus musculus
334 <400> SEQUENCE: 13
335 ccatcaaacc attccttctg tagc 24
338 <210> SEQ ID NO: 14

VERIFICATION SUMMARY DATE: 12/03/2001
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L:12 M:270 C: Current Application Number differs, Replaced Current Application Number